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## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)  
3562-000038

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]

Application Number  
10/695,402

Filed  
October 28, 2003

First Named Inventor  
Thomas Hathaway

On March 15, 2006

Art Unit  
1725

Examiner  
Ing Hour Lin

Signature

Typed or printed name David L. Suter / Jennifer M. Woodside Wojtala

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

- This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor

☐ assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)

☒ attorney or agent of record.  
Registration number 30,692 / 50,721.

☐ attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_

Signature

David L. Suter / Jennifer M. Woodside Wojtala

Typed or printed name

(248) 641-1600

Telephone number

March 15, 2006

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below\*.

☐ \*Total of \_\_\_\_\_ forms are submitted.



**PATENT**

**UNITED STATES PATENT AND TRADEMARK OFFICE**

Application No.: 10/695,402  
Filing Date: October 28, 2003  
Applicant: HATHAWAY, Thomas  
Group Art Unit: 1725  
Examiner: LIN, Ing Hour  
Title: APPARATUS FOR CLEANING CAST METAL PARTS  
Attorney Docket: 3562-000038

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Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

**REASONS FOR REQUEST FOR PRE-APPEAL BRIEF REVIEW**

Sir:

In accordance with the Pre-Appeal Brief Request for Review and accompanying Notice of Appeal being filed herewith, Applicant is requesting review of the final rejection of the above identified application. The filing of the Notice of Appeal and the Pre-Appeal Brief Request for Review is within three-months of the mailing of the Final Office Action (and in response to an Advisory Action mailed February 28, 2006).

**CLAIM STATUS**

As indicated in the Advisory Action, the Examiner did not enter the claim amendments in the Response to Office Action Under 37 C.F.R. §116 filed on February 15, 2006. The Examiner has maintained the rejections of Claims 1-6, 9-21, 24-37, 40-52, and 55-66. Claims 1-6, 9-14, 17-21 and 24-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hoffman Jr. et al. (U.S. Pat. No.

6,264,823, hereinafter “Hoffman”) in view of Madono (U.S. Pat. No. 4,584,328, hereinafter “Madono”). Claims 15-16 and 30-31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hoffman in view of Madono and further in view of Johnson et al. (U.S. Pat. No. 5,126,089, hereinafter “Johnson”). Claims 32-37, 40-52, and 55-66 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Johnson in view of Madono and further in view of Hoffman. This rejection is respectfully traversed.

Applicant respectfully submits that the rejections of record are factually and legally deficient as they do not establish a *prima facie* case of obviousness. *See e.g.*, Official Gazette Notice July 12, 2005. Thus, Applicant requests a pre-appeal brief review of the merits of the rejections, as set forth in the Final Rejection. Arguments of record are referred to by Paper Title, Date, and Page No.

In particular, a *prima facie* case of obviousness has not been established because of each of the following reasons: (1) even if combined, the cited art fails to disclose each and each and every element of the claimed invention; (2) the rejections fail to elucidate any motivation to combine the cited art so as to arrive at the presently claimed invention; and (3) the rejections fail to explain how or why one of skill in the art would have a reasonable expectation of success from combining the cited references, even if motivated to do so.<sup>1</sup> (*See e.g.*, MPEP §2143; *In re Vaeck*, 20 USPQ.2d 1438 (Fed. Cir. 1991)). Applicant respectfully submits that none of the Hoffman, Johnson, and/or Madono references provides the necessary disclosure, suggestion, or motivation to render the invention in Claims 1-6, 9-21, 24-37, 40-52, and 55-66 obvious.

**1. Each And Every Limitation of the Claimed Invention Is Not Disclosed In the Cited Art**  
Independent Claims 1, 17, 32, and 47 recite common features, including an apparatus that has a power source with electrodes that is further adapted to handle electrolyte (*i.e.*, an electrolytic cleaning system). Claims 1, 17, and 32 are directed to apparatuses and Claim 47 is directed to a method for making a clean metal part. The cited art fails to disclose or even suggest such apparatus and methods, in

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<sup>1</sup> See Response to Office Action Under 37 C.F.R. §116, 2/15/2006, Pp. 11-14.

particular, the limitation of removing residual casting material from a surface of a cast metal part via electrolytic processing.<sup>2</sup> For example, there is no disclosure in the cited references of the following limitations:

“[A] cleaner dispersing system operable to remove residual casting material from [a] cast metal part, wherein the casting material is made using a disintegration additive comprising an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte, wherein said cleaner dispersing system is operable to contact the metal part with said electrolyte.” (Independent Claim 1).

“[A] cast part, a surface of which is coated with residual casting material comprising a disintegration additive comprising an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte.” (Independent Claims 17 and 47).

“[A] casting material for forming a cast suitable for casting a part, comprising...a disintegration additive consisting essentially of an ionic compound that promotes disintegration when in the presence of an electrolyte, wherein a portion of said casting material remains in the presence of an electrolyte.” (*emphasis added* - Independent Claim 32).

The Hoffman reference discloses an electrolytic parts cleaner to remove thin coatings (*e.g.*, smut, dirt, oils, rust, scale and the like); however, it has no disclosure of using the devices or methods to electrolytically clean a cast part having a residual casting material.<sup>3</sup> Johnson and Madono are silent as to using an electrolytic parts cleaner to remove residual casting materials.<sup>4</sup>

Neither Hoffman nor any of the other cited references (Johnson and/or Madono) discloses or suggests a disintegration additive that comprises (or consists essentially of) an ionic compound that promotes disintegration of the residual casting material in the presence of an electrolyte.<sup>5</sup> Lacking any reference to several claim elements in any of the cited references, a finding *prima facie* obviousness is factually unsupported, and the rejection is legally improper.

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<sup>2</sup> Response to Office Action Under 37 C.F.R. § 116, 2/15/2006, Pp. 10-13; Response to Office Action, 9/29/2005, Pp. 13-17; Amendment After Final, 3/28/2005, Pp. 14-18.

<sup>3</sup> Response to Office Action Under C.F.R. § 116, 2/15/2006, Pp. 11-13; Response to Office Action, 9/29/2005, Pp. 14-16.

<sup>4</sup> *Id.*

<sup>5</sup> Response to Office Action, 9/29/2005, Pp. 14-16; Amendment After Final, 3/28/2005, Pp. 14-18.

## **2. The Cited References Lack Any Suggestion or Motivation to Arrive At the Claimed Invention**

No plausible suggestion or motivation has been provided in the rejection to combine the cited references so as to arrive at the claimed invention. Indeed, the cited references provide no suggestion or motivation to arrive at the claimed invention.<sup>6</sup> In particular, none of the cited references suggests or provides motivation to use electrolytic processing to remove residual casting materials.

Hoffman is entirely silent as to casting materials and lacks any objective suggestion or motivation to use an electrolytic parts-washer to remove anything other than thin films. As recognized by one of skill in the art, there is a fundamental difference between thin layers of rust, smut, paint, and grease and a thick ceramic-like solid casting material.<sup>7</sup> Moreover, Hoffman is not only silent with regard to casting materials, but provides no suggestion or motivation to include a disintegration additive comprising an ionic compound that enables effective removal of any layer, nonetheless the residual casting material from a cast part.<sup>8</sup>

Johnson and Madono disclose conventional methods of removing residual casting materials from cast parts and neither has any applicability to electrolytic processing.<sup>9</sup> Further, Madono teaches away from combination with Johnson and Hoffman.<sup>10</sup> There is lack of any objective teaching, motivation or suggestion to make the combination to arrive at the claimed invention. Lacking a motivation to combine the references of record, a finding *prima facie* obviousness is factually unsupported, and the rejection is legally improper.

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<sup>6</sup> Response to Office Action Under 37 C.F.R. §116, 2/15/2006, Pp. 11-13; Response to Office Action, 9/29/2005, Pp. 14-16; Amendment After Final, 3/28/2005, Pp. 15-18; Response, 11/10/2004, Pp. 2-6.

<sup>7</sup> Id.

<sup>8</sup> Id.

<sup>9</sup> Response to Office Action Under C.F.R. § 116, 2/15/2006, Pp. 11-13.

<sup>10</sup> Response, 11/10/04, Pp. 2-7; Response to Office Action, 9/29/2005, Pp. 15-16; Amendment After Final, 3/28/2005, Pp. 15-18; Response, 11/10/04, Pp. 2-4.

**3. One Of Skill In the Art Would Have No Reasonable Expectation of Success Regarding the Required Modification.**

The proposed combination of references provides no reasonable expectation of success regarding the required modifications.<sup>11</sup> The only cited reference that discloses electrolytic parts cleaners is Hoffman. Nowhere does Hoffman suggest that electrolytic processing can remove a ceramic-like residual casting material from a cast part. To those of ordinary skill in the art, the electrolytic parts cleaner of Hoffman would likely appear to be ineffective at removing traditional casting materials, as it only removes accumulated and lightly-adhered films.

Further, while the Madono reference generally suggests providing a plastic encapsulated additive in a casting material that potentially volatilizes during casting, the selection of such a plastic encapsulated additive would contravene the rationale for including a disintegration additive that promotes disintegration when exposed to an electrolyte and applied voltage.<sup>12</sup> Lacking a reasonable expectation for success from combining these references (assuming there was motivation to make a combination to begin with) a finding *prima facie* obviousness is factually unsupported, and the rejection is legally improper.

For all of these reasons, Applicant submits that a *prima facie* case of obviousness has not been established and request favorable review via the pre-appeal brief program.

Respectfully submitted,

Dated: March 15, 2006

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<sup>11</sup> Response to Office Action Under 37 C.F.R. §116, 2/15/2006, Pp. 11-13; Response to Office Action, 9/29/2005, Pp. 14-17.

<sup>12</sup> Response to Office Action, 9/29/2005, P. 15; Amendment After Final, 3/28/2005, Pp. 15-17.